

**USEPA REGION 9 LABORATORY**  
**REPORT NARRATIVE**

CASE NUMBER: R99S48  
SAMPLE DELIVERY GROUP: 99279B  
PROGRAM: SUPERFUND  
DOCUMENT CONTROL #: ESTW-9B-2627  
DATE: 10/20/99  
ANALYSIS: PERCHLORATE AND TOTAL DISSOLVED SOLIDS

**SAMPLE NUMBERS:**

<b><u>SAMPLE ID</u></b>	<b><u>LABORATORY SAMPLE ID</u></b>
0.8 mi. D.S. of Hoover Dam (12/16/98)	AB24741
0.8 mi. D.S. of Hoover Dam (02/03/99)	AB24742
0.8 mi. D.S. of Hoover Dam (03/03/99)	AB24743
0.8 mi. D.S. of Hoover Dam (04/26/99)	AB24744
0.8 mi. D.S. of Hoover Dam (06/23/99)	AB24745
0.8 mi. D.S. of Hoover Dam (08/25/99)	AB24746
LVW Pond Water	AB24930
LVW Seep Water	AB24931

**GENERAL COMMENTS**

Eight water samples were received from the Colorado River Perchlorate Study Superfund project on 10/07/99 and 10/08/99.

The requested analyses were perchlorate (Region 9 Lab SOP 531) and total dissolved solids (EPA Method 160.1).

**SAMPLE RECEIPT AND PRESERVATION**

For samples received on 10/07/99, no custody seals were present and the temperature of the shipping cooler was 8°C when measured upon receipt. No chain-of-custody was provided with the samples received on 10/08/99.

**QA/QC SUMMARY****Laboratory Reagent Blanks (LRB)**

*A laboratory reagent blank is laboratory reagent water or baked sand with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory reagent blank is used to determine the level of contamination introduced by the laboratory during analysis.*

No analytes were detected in the blanks associated with this SDG.

**Laboratory Fortified Matrix Spike (LFM) and Laboratory Duplicate Analysis (QC Sample: AB24741)**

*The laboratory fortified matrix spike sample and laboratory duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and*

*large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.*

The LFM recovery was within the 75-125% QC limits. The duplicate RPD for total dissolved solids was less than or equal to the QC limit of 20%. The difference between the duplicate and the sample for perchlorate was less than the quantitation limit.

#### Laboratory Fortified Blank (LFB) Analysis

*The laboratory fortified blank is laboratory reagent water or baked sand with a known concentration of the analytes of interest added by the laboratory with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. Poor percent recovery (%R) results may indicate inconsistent laboratory technique.*

All LFB recoveries were within the QC limits.

Questions concerning the data can be answered by Patrick Hirata at (510) 412-2354.

**USEPA REGION 9 LABORATORY  
QUALIFIER DEFINITIONS FOR INORGANIC SAMPLE RESULTS**

- U** The analyte was analyzed for, but was not detected above one half the Quantitation Limit (QL). The reported value is the QL for all analytes.
- J** The reported value is an estimated quantity.
- N** LFM sample recovery not within control limits. The reported value is estimated because the LFM recovery result did not meet the 75-125% criteria for accuracy. The result is considered quantitatively uncertain. The LFM analysis provides information about the effect of the sample matrix on the digestion and measurement methodology.
- \*** Duplicate analysis not within control limits. Duplicated analyses demonstrate the analytical precision obtained for each sample matrix. The result is estimated and considered quantitatively uncertain. The imprecision between duplicate results may be due to sample non-homogeneity for soil sample, high levels of solids in the sample for water samples, inconsistent laboratory technique, or method defects.

**EPA REGION 9 LABORATORY-RICHMOND, CA**  
**SUMMARY OF ANALYTICAL RESULTS**

Case Number: R99S48 Analysis: Perchlorate and TDS  
 Site: Colorado River Perchlorate Study Matrix: Water  
 SDG: 99279B  
 Date: 10/20/99

Sample No.	09421500		09421500		09421500		09421500		09421500		09421500		NA	
Sample I.D.	0.8mi DS of H.Dam		0.8mi DS of H.Dam		0.8mi DS of H.Dam		0.8mi DS of H.Dam		0.8mi DS of H.Dam		0.8mi DS of H.Dam		LVW Pond Water	
Lab Sample I.D.	AB24741		AB24742		AB24743		AB24744		AB24745		AB24746		AB24930	
Date of Collection	12/16/98		02/03/99		03/03/99		04/26/99		06/23/99		08/25/99		10/05/99	
Analyte	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Perchlorate (units of ug/L)	9		8		8		7		7		6		84000	
Total Dissolved Solids (units of mg/L)	640		580		580		620		580		590		14000	

Q - Laboratory Data Qualifiers; Refer to EPA Region 9 Laboratory Qualifier Definitions

Sample No.	N/A		N/A		N/A		Quantitation
Sample I.D.	LVW Seep Water		Reagent Blank		Reagent Blank		Limit
Lab Sample I.D.	AB24931		N/A		N/A		N/A
Date of Collection	10/05/99		N/A		N/A		N/A
Analyte	Result	Q	Result	Q	Result	Q	Result
Perchlorate (units of ug/L)	70000		5	U			5
Total Dissolved Solids (units of mg/L)	5800		20	U	20	U	20

Q - Laboratory Data Qualifiers; Refer to EPA Region 9 Laboratory Qualifier Definitions